REMARKS

Claims 1-24 are pending in the present application. In the Final Office Action mailed January 10, 2007, the Examiner provisionally rejected claims 1-24 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-25, 27-35, 37-40, 44, 45, 48-50, and 54 of copending Application No. 10/708,657 in view of McCormick (USP 6,026,682). The Examiner next rejected claims 1-11 and 18-23 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 1-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Prunier (FR 2 536 320) in view of McCormick. Claims 1-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Behnke et al. (USP 2,510,207) in view of McCormick.

On March 6, 2008, the undersigned telephoned the Examiner to discuss the rejections of the claims under §103(a) as being unpatentable over Prunier and/or Behnke et al. in view of McCormick. The undersigned appreciates the time that the Examiner allotted to discuss this matter. A discussion ensued regarding portions of the McCormick reference made of record in rejecting the claims. Upon further discussion, the Examiner and the undersigned agreed that each of independent claims 1, 12, 18, and 23 is patentably distinct over the combination of cited references at least for the reasons set forth below. As requested by the Examiner, the following summarized the discussion.

Rejection under 35 U.S.C. §103(a)

In rejecting independent claims 1, 12, 18, and 23, the Examiner stated that a combination of either Prunier et al. or Behnke et al. with McCormick renders the claims obvious. Both Prunier and Behnke et al. fail to teach or disclose a cooling system as called for in claims 1, 12, 18 and 23. Prunier fails to teach or disclose any mechanism or control for controlling coolant flow in the system. Behnke et al. discloses a system in which a control box B contains a series of relays 10, 12, 17, a timer 14, and switches 18, 20 that control the flow of argon gas and coolant in the welding torch. See *Behnke et al.*, Col. 1, lns. 52-55 and Col. 2, lns. 1-17. The relays respond to increases/decreases in arc voltage to determine when the timer and switches should be activated in order to control flow of the gas and coolant. *Id.* Behnke et al., however, does not disclose a cooling system adapted to maintain coolant circulation based on whether a temperature of the coolant exceeds a set point temperature.

The McCormick reference was thus relied upon for teaching a means to maintain coolant circulation until expiration of a specific time period and/or until a temperature falls below a certain value. McCormick, however, does not teach or suggest the subject matter lacking in both Prunier et al. and Behnke et al. Instead, McCormick teaches a coolant system safety device 10 for an automated welding machine. Safety system 10 includes a microprocessor 104, 244 configured to monitor pressure flow sensors 100, 102 that measure coolant flow rate to and from a welding component in a coolant supply tube 30 and coolant return tube 36. *McCormick*, Col. 2, ln. 43 to Col. 3, ln. 5. The flow of coolant to the welding component is monitored, and if the flow is outside a set threshold value (i.e., max/min flow rate, difference in supply/return flow readings), a solenoid valve 40 is actuated to shut-off flow of the coolant to the welding component. *McCormick*, Col. 3, lns. 5-11. In one embodiment, safety device 10 further includes a relay 290 for leak detection within the coolant flow tubes 30, 36 as well as a temperature sensor IC 334. *McCormick*, Col. 9, lns. 13-17, 38-42. Temperature sensor 334 measures a temperature of the coolant and is connected to the microprocessor 104, 224 to transfer the temperature data thereto. The microprocessor has trip points programmed therein that, when crossed, stops a welding operation. *McCormick*, Col. 9, lns. 44-50. That is, when the temperature of the coolant as measured by temperature sensor 334 is too high/low and crosses a preset trip point, a welding operation is terminated and coolant flow shut-off. *Id.* Thus, McCormick functions as a safety system (i.e., emergency shutdown) that terminates a welding operation if temperature of the coolant falls outside a certain threshold.

McCormick, however, does not teach or suggest that which is called for in claim 1, which calls for the circulation of a coolant through a welding torch to be maintained after deactivation of the welding-type component if a measured coolant temperature exceeds a threshold. As detailed in the current application, the cooling system 44 in welding-type system 10 is configured to adaptively control circulation of coolant to and from torch 32. *Application*, ¶23. The cooling system 44 is configured to maintain coolant circulation upon deactivation of the torch 32 if a measured coolant temperature exceeds a threshold. *Application*, ¶24. Thus, the cooling system called for in claim 1 is configured to maintain coolant circulation upon deactivation of a welding-type component if a measured coolant temperature exceeds a threshold.

Claim 12 calls for, in part, a controller configured to monitor a temperature of the coolant after deactivation of the welding torch and to continue coolant circulation until a temperature of the coolant falls below a predetermined value. As set forth above, McCormick does not teach or suggest a controller and/or temperature sensor for monitoring a temperature of the coolant after

deactivation of the welding torch. Rather, the system of McCormick uses a microprocessor and temperature sensor for the purpose of shutting down a welding device based on a measured coolant temperature being above or below a trip point during use of the welding device.

Claim 18 calls for monitoring coolant temperature upon deactivation and for maintaining coolant circulation through the welding-type component if the coolant temperature exceeds a threshold. As shown with respect to claims 1 and 12, McCormick does not teach or suggest such a limitation. Rather, the system of McCormick uses a microprocessor and temperature sensor to monitor coolant temperature for purposes of actually deactivating a welding component if the measured coolant temperature is above/below a trip point. Thus, claim 18 is patentably distinct over the art of record. Applicant accordingly respectfully requests withdrawal of the rejection of claim 18 and all claims depending therefrom.

Claim 23 calls for means for detecting deactivation of the means for the outputting welding-type power and means for maintaining coolant circulation until coolant temperature falls below a certain set point. As Applicant has shown above, McCormick does not teach or suggest a means for maintaining coolant circulation until coolant temperature falls below a certain set point after deactivation of a welding torch is detected. Accordingly, claim 23 is patentably distinct over the art of record, and Applicant respectfully requests withdrawal of the rejection thereof.

Rejection under 35 U.S.C. §112, Second Paragraph

The Examiner agreed to withdraw the 35 U.S.C. 112, second paragraph rejection based on a BPAI Decision[1] in one of Applicant's other cases.

Provisional Double Patenting Rejection

With respect to the provisional rejection of claims 1-24 under the doctrine of obviousness-type double patenting as being unpatentable over claims 22-25, 27-35, 37-40, 44, 45, 48-50, and 54 of co-pending Application No. 10/708,657 in view of McCormick, Applicant notes that the distinctions addressed with respect to McCormick in each application are distinct from one another. One regards, maintaining coolant flow after deactivation of the torch ('546), and the other regards sensing connections ('657). The claims in each application are clearly not obvious when compared to one another, and the clear individual distinctions with McCormick are

[1] For application Serial No. 10/249,018, *See Decision on Appeal*, January 11, 2008, p. 13-15.

evidence that the two are not indistinct. Further, the Examiner has not shown a comparison of the two sets of claims against one another to satisfy an obviousness-type double patenting rejection.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-24.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

/Timothy J. Ziolkowski/

Timothy J. Ziolkowski
Registration No. 38,368
Direct Dial 262-268-8181
tjz@zpspatents.com

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Attorney Docket No.: ITW7510.074

P.O. ADDRESS:
Ziolkowski Patent Solutions Group, SC
136 South Wisconsin Street
Port Washington, WI 53074
262-268-8100

General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.

/Timothy J. Ziolkowski/

Timothy J. Ziolkowski
Registration No. 38,368
Direct Dial 262-268-8181
tjz@zpspatents.com

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P.O. ADDRESS:
Ziolkowski Patent Solutions Group, SC
136 South Wisconsin Street
Port Washington, WI 53074
262-268-8100